INDEXES

1994 SUBJECT INDEX

Activated carbon	Arsenic
Competitive Adsorption of VOCs and BOM:	Determining the Practical Quantitation Level
The Role of Molecular Oxygen	for Arsenic
Makram T. Suidan, and Thomas F. Speth	Crafting a New Arsenic Rule
Comparing Two GACs for Adsorption	Frederick W. Pontius
and Biostabilization	Arsenic Occurrence: USEPA Seeks
Mark A. Carlson, Kevin M. Heffernan, Craig C. Ziesemer,	a Clearer Picture
and Edwin G. Snyder	Joe Reid
Using RSSCTs to Predict Field-Scale GAC Control	Health Implications of Arsenic in Drinking
of DBP Formation	Water
Laura Cummings and R. Scott Summers	Frederick W. Pontius, Kenneth G. Brown, and
Synthetic Adsorbent Versus GAC for TCE	Chien-Jen Chen
Removal	Chemistry of Arsenic Removal During Coagulation
David W. Hand, Jon A. Herlevich Jr., David L. Perram, and John C. Crittenden	and Fe–Mn Oxidation
Removing EDB With GAC Filters	Enhanced Coagulation for Arsenic Removal 86:9:79
Roberto M. Narbaitz, Alan Baratta, and Frances Z. Parsons	Robert C. Cheng, Sun Liang, Hsiao-Chiu Wang,
GAC Adsorption of Intermittently Loaded	and Mark D. Beuhler
Pesticides	
Yoshihiko Matsui, Tasuku Kamei, Etsuro Kawase,	Atrazine
Vernon L. Snoeyink, and Norihito Tambo	Organonitrogen Herbicides in the Lower Kansas River Basin
Agricultural contaminants	John K. Stamer and Ronald B. Zelt
Organonitrogen Herbicides in the Lower Kansas River	(See Erratum—86:2:4)
Basin	(See Elitabli OS.2.4)
John K. Stamer and Ronald B. Zelt	AWWA
(See Erratum—86:2:4)	A Message From the Romans
Monitoring Waivers for Phase II and Phase V	John B. Mannion
Regs	Taking the Initiative
Mary Ellen Ley	Face to Face With Robert L. Wubbena
Removing EDB With GAC Filters	Keeping the Best and Brightest
Roberto M. Narbaitz, Alan Baratta, and Frances Z. Parsons	John B. Mannion
GAC Adsorption of Intermittently Loaded	
Pesticides	Biodegradable organic matter
Yoshihiko Matsui, Tasuku Kamei, Etsuro Kawase,	A Survey of BOM in US Drinking Waters 86:2:121
Vernon L. Snoeyink, and Norihito Tambo	Louis A. Kaplan, Donald J. Reasoner, and
	Eugene W. Rice
Air-stripping	BOM Removal During Biological Treatment:
Laboratory-Scale Testing of a Continuous CLSA	A First-Order Model
Process	Peter M. Huck, Shulin Zhang, and Michael L. Price
Madhumita Bhowmick and Michael J. Semmens	
	Biological water treatment
Analytical methods	Comparing Two GACs for Adsorption and
Determining the Practical Quantitation Level	Biostabilization
for Arsenic	Mark A. Carlson, Kevin M. Heffernan, Craig C. Ziesemer,
Andrew D. Eaion	and Edwin G. Snyder
A Volumetric Method for Assessing Giardia	BOM Removal During Biological Treatment:
Inactivation	A First-Order Model
Charles N. Haas, Joel C. Hornberger, Uma Anmangandla,	Peter M. Huck, Shulin Zhang, and Michael L. Price

INDEXES

1994 SUBJECT INDEX

Activated carbon	Arsenic
Competitive Adsorption of VOCs and BOM:	Determining the Practical Quantitation Level
The Role of Molecular Oxygen	for Arsenic
Makram T. Suidan, and Thomas F. Speth	Crafting a New Arsenic Rule
Comparing Two GACs for Adsorption	Frederick W. Pontius
and Biostabilization	Arsenic Occurrence: USEPA Seeks
Mark A. Carlson, Kevin M. Heffernan, Craig C. Ziesemer,	a Clearer Picture
and Edwin G. Snyder	Joe Reid
Using RSSCTs to Predict Field-Scale GAC Control	Health Implications of Arsenic in Drinking
of DBP Formation	Water
Laura Cummings and R. Scott Summers	Frederick W. Pontius, Kenneth G. Brown, and
Synthetic Adsorbent Versus GAC for TCE	Chien-Jen Chen
Removal	Chemistry of Arsenic Removal During Coagulation
David W. Hand, Jon A. Herlevich Jr., David L. Perram, and John C. Crittenden	and Fe–Mn Oxidation
Removing EDB With GAC Filters	Enhanced Coagulation for Arsenic Removal 86:9:79
Roberto M. Narbaitz, Alan Baratta, and Frances Z. Parsons	Robert C. Cheng, Sun Liang, Hsiao-Chiu Wang,
GAC Adsorption of Intermittently Loaded	and Mark D. Beuhler
Pesticides	
Yoshihiko Matsui, Tasuku Kamei, Etsuro Kawase,	Atrazine
Vernon L. Snoeyink, and Norihito Tambo	Organonitrogen Herbicides in the Lower Kansas River Basin
Agricultural contaminants	John K. Stamer and Ronald B. Zelt
Organonitrogen Herbicides in the Lower Kansas River	(See Erratum—86:2:4)
Basin	(See Elitabli OS.2.4)
John K. Stamer and Ronald B. Zelt	AWWA
(See Erratum—86:2:4)	A Message From the Romans
Monitoring Waivers for Phase II and Phase V	John B. Mannion
Regs	Taking the Initiative
Mary Ellen Ley	Face to Face With Robert L. Wubbena
Removing EDB With GAC Filters	Keeping the Best and Brightest
Roberto M. Narbaitz, Alan Baratta, and Frances Z. Parsons	John B. Mannion
GAC Adsorption of Intermittently Loaded	
Pesticides	Biodegradable organic matter
Yoshihiko Matsui, Tasuku Kamei, Etsuro Kawase,	A Survey of BOM in US Drinking Waters 86:2:121
Vernon L. Snoeyink, and Norihito Tambo	Louis A. Kaplan, Donald J. Reasoner, and
	Eugene W. Rice
Air-stripping	BOM Removal During Biological Treatment:
Laboratory-Scale Testing of a Continuous CLSA	A First-Order Model
Process	Peter M. Huck, Shulin Zhang, and Michael L. Price
Madhumita Bhowmick and Michael J. Semmens	
	Biological water treatment
Analytical methods	Comparing Two GACs for Adsorption and
Determining the Practical Quantitation Level	Biostabilization
for Arsenic	Mark A. Carlson, Kevin M. Heffernan, Craig C. Ziesemer,
Andrew D. Eaion	and Edwin G. Snyder
A Volumetric Method for Assessing Giardia	BOM Removal During Biological Treatment:
Inactivation	A First-Order Model
Charles N. Haas, Joel C. Hornberger, Uma Anmangandla,	Peter M. Huck, Shulin Zhang, and Michael L. Price

Bromide	Conservation
Quality Degradation: Implications for DBP	Water Conservation for Rhode Island Lawns 86:4:198
Formation 86:6:34	Alyson McCann, Arthur J. Gold, Kathleen Mallon,
Stuart W. Krasner, Michael J. Sclimenti, and	and Josef Gorres
Edward G. Means	Waste Stream Recycling: Its Effect on Water
Precursor Control in Water Containing Bromide	Quality
James M. Symons, Gerald E. Speitel Jr., Alicia C. Diehl,	David A. Cornwell and Ramon G. Lee
and Harvey W. Sorensen Jr.	Corrosion
Bromide's Effect on DBP Formation, Speciation,	The Pitting Corrosion of Copper
and Control: Part 1, Ozonation 86:6:72	Marc Edwards, John F. Ferguson, and Steve H. Reiber
Hiba M. Shukairy, Richard J. Miltner, and	Electrochemical Nature of Lead Contamination 86:7:91
R. Scott Summers Evaluating Surrogates for Disinfection	J. Edward Singley Effect of Selected Anions on Copper
By-products	Corrosion
Issam N. Najm, Nancy L. Patania, Joseph G. Jacangelo, and Stuart W. Krasner	Marc Edwards, Travis Meyer, and John Rehring
Alternative Strategies for Removing Bromate 86:10:81	Cryptosporidium
Mohamed Siddiqui, Gary Amy, Kenan Ozekin,	Ensuring Water Quality in Urban Environments 86:1:8
Wenyi Zhai, and Paul Westerhoff	John R. Bolden and Walter C. Farrell Jr.
Coagulation	Waterborne Disease in the United States, 1991 and 1992
Chemistry of Arsenic Removal During Coagulation	Anne C. Moore, Barbara L. Herwaldt, Gunther F. Craun,
and Fe-Mn Oxidation	Rebecca L. Calderon, Anita K. Highsmith, and
Marc Edwards	Dennis D. Juranek
Enhanced Coagulation for Arsenic Removal 86:9:79	(See also Letters 86:7:4 and Errata 86:7:98)
Robert C. Cheng, Sun Liang, Hsiao-Chiu Wang,	Commercial Labs: How Accurate Are They? 86:5:89
and Mark D. Beuhler	Jennifer L. Clancy, William D. Gollnitz, and Zhanet Tabib The Fearless Crusader
Computers	John B. Mannion
Should the Water Industry Take a Ride on the	On TV Reporting and Parasites
Information Super Highway? 86:2:16	John B. Mannion
Walter M. Grayman	Protecting Consumers From Cryptosporidium 86:12:8
Planning Sustainable Water Systems in Developing Countries	Kenneth J. Miller
Donald T. Lauria	Customer service
Monitoring for Radon in Water	Customer Service Gains a Foothold 86:1:32
Rolf A. Deininger	Roundtable
Water Conservation for Rhode Island Lawns 86:4:198	
Alyson McCann, Arthur J. Gold, Kathleen Mallon,	Discharging
and Josef Gorres Managing Technology: The Coming	Implications of Discharging Potable Water in Southern California
Challenge	Mark D. Beuhler and Edward G. Means III
Malcolm L. Fox II	Disposal of Radioactive Residuals Requires Careful
Using the Information Superhighway to Corral	Planning
the ICR 86:6:10	Frederick W. Pontius
Michael J. McGuire Computer Modeling and Distribution Systems:	Disinfection by-products
A Dream or a Nightmare?	Comparing Two GACs for Adsorption
Robert M. Clark	and Biostabilization
SCADA Trends and Integration Perspectives 86:7:44 Lawrence A. Jentgen and Mark G. Wehmeyer	Mark A. Carlson, Kevin M. Heffernan, Craig C. Ziesemer, and Edwin G. Snyder
Knowledge-Based Systems for Maintenance 86:7:54	Toxicological Studies on MX, a Disinfection
James T. Luxhoj and Pen C. Tao	By-product
Handling Residuals With Interactive	F. Bernard Daniel, Merrel Robinson, Greg R. Olson,
Programs	Judy A. Stober, and Norbert P. Page
Nancy McTigue and Robin C. Brandt Network Modeling: Advances at a Major	Quality Degradation: Implications for DBP Formation
British Utility	Stuart W. Krasner, Michael J. Sclimenti, and
Alan Elton and Andreas M. Schulte	Edward G. Means
Expert System Assists Operators 86:12:18	Precursor Control in Water Containing
Anthony G. Collins, Joel O. Catlin,	Bromide
and Albert Ilges	and Harvey W. Sorensen Jr.
	and therety in borensen or.

BOM Removal During Biological Treatment: A First-Order Model	Erratum to: Waterborne Disease in the United States, 1991 and 1992
R. Scott Summers	Face to Face
Using RSSCTs to Predict Field-Scale GAC Control	A World View of Water Supply
of DBP Formation	Face to Face With Daniel Okun
Laura Cummings and R. Scott Summers	Taking the Initiative
Evaluating Surrogates for Disinfection	Face to Face With Robert L. Wubbena
By-products	
Issam N. Najm, Nancy L. Potania, Joseph G. Jacangelo,	Filtration
and Stuart W. Krasner	Competitive Adsorption of VOCs and BOM: The Role
Alternative Strategies for Removing	of Molecular Oxygen
Bromate	George A. Sorial, Perry Cerminara, Spyridon P. Papadimas,
Mohamed Siddiqui, Gary Amy, Kenan Ozekin, Wenyi Zhai,	Makram T. Suidan, and Thomas F. Speth
and Paul Westerhoff	Comparing Two GACs for Adsorption
Selecting Membranes for Removing NOM and DBP	and Biostabilization
Precursors From Groundwater 86:12:55	Mark A. Carlson, Kevin M. Heffernan, Craig C. Ziesemer,
Paul Fu, Hector Ruiz, Ken Thompson, and	and Edwin G. Snyder
Carl Spangenberg	Dual-Stage Filtration Proves Cost-Effective 86:5:75 Frank A. Brigano, James P. MacFarland,
Distribution systems	Peter E. Shanaghan, and Bruce Burton
Computer Modeling and Distribution Systems:	Using RSSCTs to Predict Field-Scale GAC Control
A Dream or a Nightmare?	of DBP Formation
Robert M. Clark	Laura Cummings and R. Scott Summers
SCADA Trends and Integration Perspectives 86:7:44	Effect of Iron Oxide Coating on Sand Filtration 86:8:37 V. Susie Stenkamp and Mark M. Benjamin
Lawrence A. Jentgen and Mark G. Wehmeyer Knowledge-Based Systems for Maintenance 86:7:54	Synthetic Adsorbent Versus GAC for TCE
James T. Luxhoj and Pen C. Tao	Removal
Head Loss Testing in Transmission Mains 86:7:62	David W. Hand, Jon A. Herlevich Jr., David L. Perram,
Thomas M. Walski and Shaun J. O'Farrell	and John C. Crittenden
Stainless-Steel Piping	Removing EDB With GAC Filters 86:8:73
Arthur H. Tuthill	Roberto M. Narbaitz, Alan Baratta, and Frances Z. Parsons
(See also Letters to the Editor 86:10:4)	GAC Adsorption of Intermittently Loaded
The Pitting Corrosion of Copper	Pesticides
Marc Edwards, John F. Ferguson, and	Yoshihiko Matsui, Tasuku Kamei, Etsuro Kawase,
Steve H. Reiber	Vernon L. Snoeyink, and Norihito Tambo
Electrochemical Nature of Lead	Cost Estimates for Membrane Filtration and Conventional
Contamination	Treatment
J. Edward Singley	Mark R. Wiesner, John Hackney, Sandeep Sethi,
Low-Pressure Problem Caused by Hydraulic	Joseph G. Jacangelo, and Jean-Michael LaŒn,
Transients	Membrane Plants in North America 86:12:42
Thomas M. Walski and Teresa Lutes	Oram J. Morin
	Selecting Membranes for Removing NOM and DBP
Emergency preparedness	Precursors
Overcoming the Flood: How Midwestern Utilities	Paul Fu, Hector Ruiz, Ken Thompson, and
Managed Disaster	Carl Spangenberg
Surviving the Flood: Teamwork Pays Off	Finance
in Des Moines	The Competition for Federal Funds
Weathering the Storm: Water Systems Versus	Are Water Rates Becoming Unaffordable? 86:2:79
Hurricanes	Scott J. Rubin
Maripat Murphy	Managing the Financial Condition of a Utility 86:4:176
Emergency Preparedness and Response 86:1:84	Edward J. Amatetti
Todd A. Shimoda	A Look at the Federal Drinking Water Revolving Loan
	Fund Proposals
Errata	Frederick W. Pontius
Erratum to: Organonitrogen Herbicides in the Lower	Cost-effectiveness of SDWA Regulations 86:8:28
Kansas River Basin	Robert S. Raucher, Ann M. Dixon, Eloise Trabka, and
John K. Stamer and Ronald B. Zelt	Joseph A. Drago

Developing Rates With Citizen Involvement 86:10:48	Precursor Control in Water Containing
Robert Reed and Ronald L. Johnson	Bromide
Water Affordability and Alternatives to Service	James M. Symons, Gerald E. Speitel Jr., Alicia C. Diehl,
Disconnection	and Harvey W. Sorensen Jr.
Janice A. Beecher	Bromide's Effect on DBP Formation, Speciation,
Regulatory Compliance Costs	and Control: Part 1, Ozonation
Development Fees: A Legislative History 86:11:40	R. Scott Summers
Don M. Clark	Evaluating Surrogates for Disinfection
Don M. Clark	By-products
Flocculation	Issam N. Najm, Nancy L. Patania, Joseph G. Jacangelo,
Evaluating Buoyant Coarse Media Flocculation 86:8:51	and Stuart W. Krasner
Christopher R. Schulz, Philip C. Singer, Robert Gandley,	Will Siller II. III done
and James E. Nix	Human resources
	Tips for Success
Giardia	John B. Mannion
Waterborne Disease in the United States, 1991	Keeping the Best and Brightest
and 1992	John B. Mannion
Anne C. Moore, Barbara L. Herwaldt, Gunther F. Craun,	TQM in Orem, Utah: Responsive Agency, Satisfied
Rebecca L. Calderon, Anita K. Highsmith, and	Customers
Dennis D. Juranek	Bruce W. Chesnut, Doyle E. Buckwalter, and
(See also Letters 86:7:4 and Errata 86:7:98)	Robert J. Parsons
A Volumetric Method for Assessing Giardia	Performance Improvement: A Challenge for Water
Inactivation	Utilities
Charles N. Haas, Joel C. Hornberger, Uma Anmangandla,	Ellen Duke Erhardt and Gregory L. Kramer
Mark Heath, and Joseph G. Jacangelo	Information Collection Bule
Commercial Labs: How Accurate Are They? 86:5:89	Information Collection Rule
Jennifer L. Clancy, William D. Gollnitz, and Zhanet Tabib	Using the Information Superhighway to Corral
Granular activated carbon	the ICR
Comparing Two GACs for Adsorption	Information Collection Rule Delayed 86:6:12
and Biostabilization	Frederick W. Pontius
Mark A. Carlson, Kevin M. Heffernan, Craig C. Ziesemer,	Tructure W. Politins
and Edwin G. Snyder	International water supply
BOM Removal During Biological Treatment:	Planning Sustainable Water Systems in Developing
A First-Order Model	Countries
Peter M. Huck, Shulin Zhang, and Michael L. Price	Donald T. Lauria
Using RSSCTs to Predict Field-Scale GAC Control	A World View of Water Supply 86:3:19
of DBP Formation	Face to Face With Daniel Okun
Laura Cummings and R. Scott Summers	Privatizing Infrastructure: Options for Municipal
Synthetic Adsorbent Versus GAC for	Water Systems
TCE Removal	David Haarmeyer
David W. Hand, Jon A. Herlevich Jr., David L. Perram,	British Privatization: Balancing Needs 86:3:56
and John C. Crittenden	Alan Booker
Removing EDB With GAC Filters	Privatization in England and Wales 86:3:64
Roberto M. Narbaitz, Alan Baratta, and Frances Z. Parsons	Jack Jeffery Privatizing the Mexican Water Industry 86:3:69
GAC Adsorption of Intermittently Loaded Pesticides	Carlos Casasús
Yoshihiko Matsui, Tasuku Kamei, Etsuro Kawase,	Water Industry Best Practices 86:3:74
Vernon L. Snoeyink, and Norihito Tambo	Neville Green and Roger Patrick
Territor at one cylind, and a territor and a	Network Modeling: Advances at a Major British
Groundwater	Utility
Synthetic Adsorbent Versus GAC for TCE	Alan Elton and Andreas M. Schulte
Removal	
David W. Hand, Jon A. Herlevich Jr., David L. Perram,	lon exchange
and John C. Crittenden	Modifying Ion Exchange for Combined Removal
Removing EDB With GAC Filters 86:8:73	of Uranium and Radium
Roberto M. Narbaitz, Alan Baratta, and Frances Z. Parsons	Dennis Clifford and Zhihe Zhang
	Exhausting and Regenerating Resin for Uranium
Haloacetic acids	Removal
Quality Degradation: Implications for	Zhihe Zhang and Dennis Clifford
DBP Formation	
Suart W. Krasner, Michael J. Sellmenti, and	

Edward G. Means

Iron removal Examining the Reactions Between Soluble Iron, DOC,	1993 Errata Erratum to: Using a Hydraulic Model to Predict
and Alternative Oxidants During Conventional Treatment	Hollow-Fiber UF Performance
William R. Knocke, Holly L. Shorney, and Julia D. Bellamy	Erratum to: D-DBP Rule to Set Tight Standards 86:2:4
Laboratories	Frederick W. Pontius
Determining the Practical Quantitation Level	Erratum to: Table of Values of Most Probable Numbers:
for Arsenic	Ten Tubes, Three Dilutions
Commercial Labs: How Accurate Are They? 86:5:89 Jennifer L. Clancy, William D. Gollnitz, and Zhanet Tabib	and Benjamin R. Tamplin (deceased) Erratum to: Calculating C × T Compliance 85:12:12 Peter Martin
Load	
Electrochemical Nature of Lead Contamination 86:7:91 J. Edward Singley	Oxidants Examining the Reactions Between Soluble Iron, DOC, and Alternative Oxidants During Conventional
Legislation/Regulation	Treatment
Congress to Decide Fate of Radon Standard 86:1:18 Frederick W. Pontius and David B. Paris	William R. Knocke, Holly L. Shorney, and Julia D. Bellamy
SDWA Reauthorization Battle Begins 86:2:18	Ozonation
Frederick W. Pontius and Albert E. Warburton	Effects of Ozonation on Coagulation of NOM Using
A Look at the Federal Drinking Water Revolving Loan Fund Proposals	Polymer Alone and Polymer/Metal Salt Mixtures
Frederick W. Pontius	Marc Edwards, Mark M. Benjamin, and John E. Tobiason
Information Collection Rule Delayed 86:6:12	Comparing Two GACs for Adsorption
Frederick W Ponting	and Biostabilization
Inside Senate Bill 2019	Mark A. Carlson, Kevin M. Heffernan, Craig G. Ziesemer, and Edwin G. Snyder
A Preview of the New Sulfate Proposal 86:8:20	Precursor Control in Water Containing
Frederick W. Pontius	Bromide 86:6:48
Crafting a New Arsenic Rule	James M. Symons, Gerald E. Speitel Jr., Alicia C. Diehl, and Harvey W. Sorensen Jr.
Environmental and Related Federal Laws Affecting	Bromide's Effect on DBP Formation, Speciation,
Water Utilities	and Control: Part 1, Ozonation
Disposal of Radioactive Residuals Requires	R. Scott Summers
Careful Planning	Alternative Strategies for Removing Bromate 86:10:81 Mohamed Siddiqui, Gary Amy, Kenan Ozekin, Wenyi Zhai, and Paul Westerhoff
Membrane filtration	um I um mesternogy
Cost Estimates for Membrane Filtration and Conventional	Pesticides
Treatment	Organonitrogen Herbicides in the Lower Kansas River Basin
Membrane Plants in North America	(See Erratum—86:2:4)
Oram J. Morin	Monitoring Waivers for Phase II and Phase V Regs . 86:5:63
Selecting Membranes for Removing NOM and DBP Precursors	Mary Ellen Ley Removing EDB With GAC Filters
Paul Fu, Hector Ruiz, Ken Thompson, and Carl Spangenberg	Roberto M. Narbaitz, Alan Baratta, and Frances Z. Parsons GAC Adsorption of Intermittently Loaded
and opinion of	Pesticides
Natural disasters	Yoshihiko Matsui, Tasuku Kamei, Etsuro Kawase,
Overcoming the Flood: How Midwestern Utilities Managed Disaster	Vernon L. Snoeyink, and Norihito Tambo
Joe Reid	Piping
Surviving the Flood: Teamwork Pays Off in Des Moines	Head Loss Testing in Transmission Mains 86:7:62 Thomas M. Walski and Shaun J. O'Farrell
L.D. McMullen	Stainless-Steel Piping
Weathering the Storm: Water Systems Versus	Arthur H. Tuthill
Hurricanes	(See also Letters to the Editor 86:10:4) The Pitting Corrosion of Copper
Emergency Preparedness and Response 86:1:84	Marc Edwards, John F. Ferguson, and Steve H. Reiber

Electrochemical Nature of Lead Contamination 86:7:91	The Fearless Crusader
J. Edward Singley	John B. Mannion
Effect of Selected Anions on Copper Corrosion 86:12:73 Marc Edwards, Travis Meyer, and John Rehring	Who's Winning the Game?
	Keeping the Best and Brightest
Privatization	John B. Mannion
Privatizing Infrastructure: Options for Municipal Water Systems	Advice From a Roman Poet
David Haarmeyer	On TV Reporting and Parasites
British Privatization: Balancing Needs	John B. Mannion Opening the CEO's Box
Privatization in England and Wales	John B. Mannion
Jack Jeffery	John B. Mannion
Privatizing the Mexican Water Industry 86:3:69	Regulations
Carlos Casasús	Congress to Decide Fate of Radon Standard 86:1:18 Frederick W. Pontius and David B. Paris
Public relations	SDWA Reauthorization Battle Begins 86:2:18
Understanding the Press	Frederick W. Pontius and Albert E. Warburton
John B. Mannion	The Current Regulatory Agenda: An Update 86:2:54
Principles of Community Outreach 86:5;8	Frederick W. Pontius and J. Alan Roberson
A. Robert Rubin	Penalties for SDWA and CWA Violations 86:2:64
TQM in Orem, Utah: Responsive Agency, Satisfied	Kenneth A. Rubin
Customers	Costs and Benefits of Current SDWA
Bruce W. Chesnut, Doyle W. Buckwalter, and	Regulations
Robert J. Parsons	Jan Auerbach
Developing Rates With Citizen Involvement 86:10:48 Robert Reed and Ronald L. Johnson	A Look at the Federal Drinking Water Revolving Loan
On TV Reporting and Parasites	Fund Proposals
John B. Mannion	Strategic Planning for SDWA Compliance in Small
John B. Mannion	Systems
Radionuclides	John E. Cromwell III
Congress to Decide Fate of Radon Standard 86:1:18	Small Systems and SDWA Reauthorization 86:5:52
Frederick W. Pontius and David B. Paris	Peter E. Shanaghan
Monitoring for Radon in Water	Monitoring Waivers for Phase II and Phase V Regs
Modifying Ion Exchange for Combined Removal	Mary Ellen Ley
of Uranium and Radium	Information Collection Rule Delayed 86:6:12
Dennis Clifford and Zhihe Zhang	Frederick W. Pontius
Exhausting and Regenerating Resin for Uranium	Inside Senate Bill 2019
Removal	Frederick W. Pontius
Zhihe Zhang and Dennis Clifford	A Preview of the New Sulfate Proposal 86:8:20 Frederick W. Pontius
Rates	Cost-effectiveness of SDWA Regulations 86:8:28
Are Water Rates Becoming Unaffordable? 86:2:79 Scott J. Rubin	Robert S. Raucher, Ann M. Dixon, Eloise Trabka, and Joseph A. Drago
Developing Rates With Citizen Involvement 86:10:48	Crafting a New Arsenic Rule 86:9:6
Robert Reed and Ronald L. Johnson	Frederick W. Pontius
Water Affordability and Alternatives to Service	Arsenic Occurrence: USEPA Seeks a Clearer
Disconnection	Picture
	Health Implications of Arsenic in Drinking
Reflections	Water
A Message From the Romans	Frederick W. Pontius, Kenneth G. Brown, and
John B. Mannion	Chien-Jen Chen
Tips for Success	Advice From a Roman Poet
John B. Mannion	John B. Mannion
Can We Talk About It?86:3:6	Environmental and Related Federal Laws Affecting
John B. Mannion	Water Utilities
How to Carve a Rose	Frederick W. Pontius
John B. Mannion	Disposal of Radioactive Residuals Requires Careful
Understanding the Press	Planning
JUHI D. MUHHUN	TICHEILK W. I UILLUS

Reservoirs	Small Systems and SDWA Reauthorization 86:5:52 Peter E. Shanaghan
Supply Storage in Federal Reservoirs	Inside Senate Bill 2019
Residuals	Cost-effectiveness of SDWA Regulations 86:8:28
Handling Residuals With Interactive Programs	Robert S. Raucher, Ann M. Dixon, Eloise Trabka, and Joseph A. Drago
Disposal of Radioactive Residuals Requires Careful	Small systems
Planning	Principles of Community Outreach
Waste Stream Recycling: Its Effect on Water Quality	Strategic Planning for SDWA Compliance in Small Systems
Long-term Effects of Sludge Application	Small Systems and SDWA Reauthorization 86:5:52
to Land	Peter E. Shanaghan
Wesley S. Geertsema, William R. Knocke, John R. Novak,	Monitoring Waivers for Phase II and Phase V
and Dennis Dove	Regs
Effects of Alum Sludge on Plant Growth 86:11:75	Mary Ellen Ley
Jay B. Lucas, Theo A. Dillaha, Raymond B. Reneau, John T. Novak, and William R. Knocke The Effect of Shear on the Dewatering of Water	Dual-Stage Filtration Proves Cost-Effective 86:5:75 Frank A. Brigano, James P. MacFarland, Peter E. Shanaghan, and Bruce Burton
Treatment Residuals	Teter E. Shanaghan, and Druce Burton
John R. Novak and Nazih Bandak	Sulfate
	A Preview of the New Sulfate Proposal 86:8:20
Resource management	Frederick W. Pontius
Supply Storage in Federal Reservoirs 86:4:188 Ralph A. Wurbs	Surveys
Water Conservation for Rhode Island Lawns 86:4:198	A Survey of BOM in US Drinking Waters 86:2:121
Alyson McCann, Arthur J. Gold, Kathleen Mallon, and Josef Gorres	Louis A. Kaplan, Donald J. Reasoner, and Eugene W. Rice Membrane Plants in North America
Implications of Discharging Potable Water in Southern California	Oram J. Morin
Mark D. Beuhler and Edward G. Means III	Synthetic adsorbents
Protecting Water Quality in the Watershed 86:8:10	Synthetic Adsorbent Versus GAC for TCE
Carol Ruth James, Karen E. Johnson, and Edward H. Stewart	Removal
Roundtables	ana John C. Crittenaen
Customer Service Gains a Foothold	Training Training for the Next Century
The Competition for Federal Funds	Roundtable Training Improves Management Effectiveness 86:10:73
Training for the Next Century	Patricia Jean Schmid and W.J. (Jack) Markel
Choosing Best Practices	Toxicology Toxicological Studies on MV a Disinfection
Regulatory Compliance Costs	Toxicological Studies on MX, a Disinfection By-product
Roundtable	F. Bernard Daniel, Merrel Robinson, Greg R. Olson, Judy A. Stober, and Norbert P. Page
Safe Drinking Water Act	
SDWA Reauthorization Battle Begins 86:2:18	Trihalomethanes
Frederick W. Pontius and Albert E. Warburton	Quality Degradation: Implications for DBP
The Current Regulatory Agenda: An Update 86:2:54 Frederick W. Pontius and J. Alan Roberson Penalties for SDWA and CWA Violations 86:2:64	Formation
Kenneth A. Rubin	Precursor Control in Water Containing
Costs and Benefits of Current SDWA Regulations 86:2:69 Jan Auerbach	Bromide
Strategic Planning for SDWA Compliance in Small Systems	and Harvey W. Sorensen Jr.

BOM Removal During Biological Treatment: A First-Order Model	Performance Improvement: A Challenge for Water Utilities
Utility management	Volatile organic chemicals
Ensuring Water Quality in Urban Environments	Competitive Adsorption of VOCs and BOM: The Role of Molecular Oxygen
Are Water Rates Becoming Unaffordable? 86:2:79 Scott J. Rubin	Regs 86:5:63 Mary Ellen Ley
Privatizing Infrastructure: Options for Municipal Water Systems	Synthetic Adsorbent Versus GAC for TCE Removal
British Privatization: Balancing Needs	and John C. Crittenden Laboratory-Scale Testing of a Continuous CLSA
Privatization in England and Wales	Process
Privatizing the Mexican Water Industry 86:3:69 Carlos Casasús	Waterborne disease
Water Industry Best Practices	Ensuring Water Quality in Urban
Neville Green and Roger Patrick	Environments
How to Carve a Rose	John R. Bolden and Walter C. Farrell Jr. Waterborne Disease in the United States,
Principles of Community Outreach	1991 and 1992
Challenge	Dennis D. Juranek (See also Letters 86:7:4 and Errata 86:7:98)
Training for the Next Century	Watershed protection
Strategic Planning for SDWA Compliance in Small Systems	Quality Degradation: Implications for DBP Formation
Managing the Financial Condition of a Utility 86:4:176 Edward J. Amatetti	Edward G. Means Protecting Water Quality in the Watershed 86:8:10
Who's Winning the Game?	Carol Ruth James, Karen E. Johnson, and Edward H. Stewart
SCADA Trends and Integration Perspectives 86:7:44 Lawrence A. Jentgen and Mark G. Wehmeyer	Zebra mussels
Knowledge-Based Systems for Maintenance 86:7:54 James T. Luxhoj and Pen C. Tao	Monitoring the Effects of Zebra Mussels on Raw Water Intakes
Choosing Best Practices	Sami F. Sarrouh and Nagah Ramadan
TQM in Orem, Utah: Responsive Agency, Satisfied Customers	

Amatetti, Edward J.-86:4:176 Amy, Gary-86:10:81 Anmangandla, Uma-86:2:115 Auerbach, Jan-86:2:69 Bandak, Nazih-86:11:84 Baratta, Alan-86:8:73 Beecher, Janice A .- 86:10:61 Bellamy, Julia D.-86:1:117 Benjamin, Mark M .- 86:1:105, 86:8:37 Beuhler, Mark D.-86:4:205 Bhowmick, Madhumita-86:8:86 Bolden, John R.-86:1:8 Booker, Alan-86:3:56 Brandt, Barbara-86:2:137 Brandt, Robin C .- 86:11:10 Brigano, Frank A.-86:5:75 Brown, Kenneth G.-86:9:52 Buckwalter, Doyle W .- 86:10:34 Buehler, Mark D.-86:9:79 Burton, Bruce-86:5:75 Calderon, Rebecca L.-86:2:87 Carlson, Mark A .- 86:3:91 Casasús, Carlos-86:3:69 Catlin, Joel O .- 86:12:18 Cerminara, Perry-86:3:80 Chen, Chien-Jen-86:9:52 Cheng, Robert C .- 86:9:79 Chesnut, Bruce W .- 86:10:34 Clancy, Jennifer L.-86:5:89 Clark, Don M .- 86:11:40 Clark, Robert M .- 86:6:10 Clifford, Dennis-86:4:214, 86:4:228 Collins, Anthony G .- 86:12:18 Cornwell, David A .- 86:11:50 Craun, Gunther F.-86:2:87 Crittenden, John C.-86:8:64 Cromwell, John E. III-86:5:42 Cummings, Laura-86:6:88 Daniel, F. Bernard-86:3:103 Deininger, Rolf A.—86:4:10 Derowitsch, Richard-86:1:132 Diehl, Alicia C .- 86:6:48 Dillaha, Theo A.-86:11:75 Dixon, Ann M.-86:8:28 Dove, Dennis-86:11:64 Drago, Joseph A.-86:8:28 Eaton, Andrew D.-86:2:100 Edwards, Marc-86:1:105, 86:7:74, 86:9:64, 86:12:73 Elton, Alan-86:11:32 Erhardt, Ellen Duke-86:10:41 Farrell, Walter C. Jr.-86:1:8 Ferguson, John F.-86:7:74

Fu, Paul-86:12:55 Gandley, Robert-86:8:51 Geertsema, Wesley S .- 86:11:64 Gold, Arthur J .- 86:4:198 Gollnitz, William D.-86:5:89 Gorres, Josef-86:4:198 Grayman, Walter M.-86:2:16 Green, Neville-86:3:74 Haarmeyer, David-86:3:42 Haas, Charles N .-- 86:2:115 Hackney, John-86:12:33 Hand, David W.—86:8:64 Heath, Mark-86:2:115 Heffernan, Kevin M.-86:3:91 Herlevich, Jon A. Jr.-86:8:64 Herwaldt, Barbara L .- 86:2:87 Highsmith, Anita K.-86:2:87 Hornberger, Joel C .- 86:2:115 Huck, Peter M.-86:6:61 Ilges, Albert-86:12:18 Jacangelo, Joseph G.—86:2:115, 86:6:98, 86:12:33 James, Carol Ruth-86:8:10 Jeffery, Jack-86:3:64 Jentgen, Lawrence A .- 86:7:44 Johnson, Ronald L .- 86:10:48 Johnson, Karen E.-86:8:10 Juranek, Dennis D.—86:2:87 Kamei, Tasuku-86:9:91 Kaplan, Louis A .- 86:2:121 Kawase, Etsuro-86:9:91 Knocke, William R.-86:1:117, 86:11:64, 86:11:75 Kramer, Gregory L .-- 86:10:41 Krasner, Stuart W.-86:6:34, 86:6:98 Laîné, Jean-Michael-86:12:33 Lauria, Donald T .- 86:3:10 Lee, Ramon G.-86:11:50 Ley, Mary Ellen-86:5:63 Liang, Sun-86:9:79 Lucas, Jay B .- 86:11:75 Lutes, Teresa-86:12:24 Luxhoj, James T.-86:7:54 MacFarland, James P.-86:5:75 Mallon, Kathleen-86:4:198 Mannion, John B.-86:1:6, 86:2:6, 86:3:6, 86:4:6, 86:5:6, 86:6:6, 86:7:6, 86:8:6, 86:10:6, 86:11:6, 86:12:6 Markel, W.J. (Jack)-86:10:73 Matsui, Yoshihiko-86:9:91 McCann, Alyson-86:4:198 McGuire, Michael J.-86:6:10

McMullen, L.D.-86:1:68

McTigue, Nancy-86:11:10

Means, Edward G. III-86:6:34, 86:4:205 Meyer, Travis-86:12:73 Miller, Kenneth J.-86:12:8 Miltner, Richard J.-86:6:72 Moore, Anne C .- 86:2:87 Morin, Oram J.-86:12:42 Murphy, Maripat-86:1:74 Najm, Issam N.-86:6:98 Narbaitz, Roberto M.-86:8:73 Nix, James E.-86:8:51 Novak, John R.-86:11:64, 86:11:75, 86:11:84 O'Farrell, Shaun J .- 86:7:62 Olson, Greg R.-86:3:103 Ozekin, Kenan-86:10:81 Page, Norbert P.86:3:103 Papadimas, Spyridon P.-86:3:80 Paris, David B .- 86:1:18 Parsons, Robert J.-86:10:34 Parsons, Frances Z.—86:8:73 Patania, Nancy L.-86:6:98 Patrick, Roger-86:3:74 Perram, David L .- 86:8:64 Pontius, Frederick W.-86:1:18, 86:2:18, 86:2:54, 86:5:16, 86:6:12, 86:7:12, 86:8:20, 86:9:6, 86:9:52, 86:10:10, 86:11:18 Price, Michael L.-86:6:61 Ramadan, Nagah-86:5:98 Raucher, Robert S.-86:8:28 Reasoner, Donald J.-86:2:121 Reed, Robert-86:10:48 Rehring, John-86:12:73 Reiber, Steve H .- 86:7:74 Reid, Joe-86:1:58, 86:9:44 Reneau, Raymond B .-- 86:11:75 Rice, Bob-86:3:118 Rice, Eugene W.-86:2:121 Roberson, J. Alan-86:2:54 Robinson, Merrel-86:3:103 Rubin, Scott J.-86:2:79 Rubin, A. Robert-86:5:8 Rubin, Kenneth A.-86:2:64 Ruiz, Hector-86:12:55 Sarrouh, Sami F.-86:5:98 Schmid, Patricia Jean-86:10:73 Schulte, Andreas M.—86:11:32 Schulz, Christopher R.—86:8:51 Sclimenti, Michael J.-86:6:34 Semmens, Michael J.-86:8:86 Sethi, Sandeep-86:12:33 Shanaghan, Peter E .- 86:5:52, 86:5:75 Shimoda, Todd A .-- 86:1:84

Fox, Malcolm L. II-86:5:26

Shorney, Holly L.—86:1:117
Shukairy, Hiba M.—86:6:72
Siddiqui, Mohamed—86:10:81
Singer, Philip C.—86:8:51
Singley, J. Edward—86:7:91
Smith, Terry—86:1:132
Snoeyink, Vernon L.—86:9:91
Snyder, Edwin G.—86:3:91
Sorensen, Harvey W. Jr.—86:6:48
Sorial, George A.—86:3:80
Spangenberg, Carl—86:12:55
Speitel, Gerald E. Jr.—86:6:48
Speth, Thomas F.—86:3:80

Stamer, John K.—86:1:93
Stenkamp, V. Susie—86:8:37
Stewart, Edward H.—86:8:10
Stober, Judy A.—86:3:103
Suidan, Makram T.—86:3:80
Summers, R. Scott—86:6:72, 86:6:88
Symons, James M.—86:6:48
Tabib, Zhanet—86:5:89
Tambo, Norihito—86:9:91
Tao, Pen C.—86:7:54
Thompson, Ken—86:12:55
Tobiason, John E.—86:1:105
Trabka, Eloise—86:8:28
Tuthill, Arthur H.—86:7:67

Walski, Thomas M.—86:7:62, 86:12:24
Wang, Hsiao-Chiu—86:9:79
Warburton, Albert E.—86:2:18
Wehmeyer, Mark G.—86:7:44
Westerhoff, Paul—86:10:81
Wiesner, Mark R.—86:12:33
Wurbs, Ralph A.—86:4:188
Zelt, Ronald B.—86:1:93
Zhai, Wenyi—86:10:81
Zhang, Zhihe—86:4:214, 86:4:228
Zhang, Shulin—86:6:61
Ziesemer, Craig C.—86:3:91

1994 ROUNDTABLE/FACE TO FACE CONTRIBUTORS

Martin J. Allen
Janet L. Auerbach
Steve Clark
Patricia Colson
John E. Cromwell III
John DeKam
Jack DeMarco
Paul Dreyer
Linda Faulkner-Vaughn
Duane Georgeson
Rick Harmon

Robert B. Jackson Donna G. Jensen Jess Jones Vanessa M. Leiby Ron Lovan Frederick A. Marrocco Sue R. McCormick Daniel Okun Roger Patrick Ray Pirkl Robert Raucher Joe Reid Robert C. Renner David L. Rossiter Richard Sawey Gene Seibel Peter Shanaghan Gerald (Jerry) C. Smith Sam Wade John P. Waters Robert L. Wubbena John S. Young Jr.